

THIRD REPORT ON SOME MEXICAN HYMENOPTERA, PRINCIPALLY FROM LOWER CALIFORNIA.

BY WILLIAM J. FOX.

[With Plate xxi.]

The present paper is based on collections made in the fall of 1894, by Messrs. Eisen and Vaslit. By far the greater portion was gathered at San José del Cabo in September, and contains a number of species not mentioned in my former paper. The remainder, from the vicinity of Tepic, in the Territory of Tepic, on the Pacific Coast of Mexico, is of interest as it demonstrates the difference of the fauna of the main land from that of the peninsula, as the species are in nearly every case different from those of the latter region. The ants and parasitic hymenoptera are not included herein, but will form the subjects of other papers by Messrs. Pergande and Ashmead respectively.

CHRYSIDIDÆ.

CHRYISIS SELENIA Costa. Numerous specimens. San José del Cabo.

MUTILLIDÆ.

MUTILLA ORNATIVENTRIS Cress. San José del Cabo. One specimen. Apparently a widely distributed species, as I have seen specimens from the eastern United States and Canada.

SPHÆROPTHALMA NORTONI Bl. Tepic. Two specimens, differing from the type in having the orange spots on anterior portion of second dorsal abdominal segment connected with the orange on posterior portion; otherwise the same, but a little larger.

SPHÆROPTHALMA SACKENII Cress. San José del Cabo. Five ♂ specimens, varying from 9–15 mm. in length.

SPHÆROPTHALMA MAGNA Cress. San José del Cabo. Thirteen specimens.

SPHÆROPTHALMA GLORIOSA Sauss. San José del Cabo. Fifteen specimens. The ground color of this species varies considerably; usually entirely red, yet forms occur with it entirely black, but forms intermediate are commoner. The color of the unusually long, white pubescence with which the species is clothed is invariable. The size varies from 8-17 mm.

SPHÆROPTHALMA XALAPA Bl. San José del Cabo. One specimen.

SCOLIIDÆ.

MYZINE HAMATA Say. Three females. San José del Cabo and Tepic. The markings of the abdomen show considerably variation in this species. The form occurring in the eastern United States usually has the third and fourth dorsal segments, in the ♀, banded with yellow; in the two specimens from San José these bands are interrupted medially, but are more prolonged than the lateral spots on the other segments; in the Tepic specimen the third segment only is banded.

MYZINE HYALINA Cress. One ♂. San José del Cabo.

MYZINE SEXCINCTA Fabr. What I take to be a variety of this species is represented in the collection by a single ♀ from Tepic. Dorsal abdominal segments 1-4 are each marked by a broad yellow band; the coxæ, trochanters and basal two-thirds of the femora black; flagellum blackish. I considered this specimen at first as representing a new species, but the absence of substantial structural characters together with the fact that forms, more or less intermediate with the typical one, occur in the United States, led me to consider it but a variety.

ENGYCYSTIS* gen. nov.

Plate xxi, fig. 1, female; fig. 2, head from front; fig. 3, abdomen of ♂; fig. 4, hind leg of ♀; fig. 5, fore leg of same.

Form elongate, *slender in both sexes*. Eyes tolerably large, reaching the base of mandibles, *not emarginate in either sex*. Mandibles *armed internally with a strong tooth between middle and apex*. Ocelli distinct. Insertions of antennæ protected by a prominent lobe, the distance between the insertions less than that between them and the eye margin. Antennæ rather long and slender, tapering to apex, in length about equal to the thorax, joints long and easily distinguished, 12 in ♀, 13 in ♂. *Maxillary palpi 5-, labial palpi 4-jointed*, the joints of the former unusually *long and slender*, of the later short and stout. Thorax elongate-oblong, narrower than head. Pronotum much longer than dorsulum and shorter than middle-segment, the dorsulum small, if anything, shorter than scutellum, the latter somewhat narrowed posteriorly and longer than broad. Mesopleuræ *ridged anteriorly, and beneath separated from the mesosternum by an indistinct furrow*. Metapleuræ less deeply sunken than in *Myzine*. Middle-segment in the only known species coarsely rugose or rugoso-reticulate. *Legs slender in both sexes*, the femora and tibiæ *not flattened or broadened*. Hind femora at apex beneath *produced into a rather sharp tooth*. Fore tibiæ with one, medial and hind pair with two spurs, the hind pair being also strongly serrated in the ♀, less strongly in ♂, and with the tarsi well spined. Anterior metatarsus *with a feeble comb*, composed of short, straight spines. Middle coxæ a little separated. Abdomen about as in ♂ *Myzine*, but not so strongly constricted at base and apex of the segments. Last dorsal segment of ♀

* ἐγγύς = close by + κύστις = cell.

with a well developed pygidial area *which is smooth and bounded laterally by a sharp ridge*, in the ♂ this segment is emarginate at apex into which the huge, curved spine fits, which extends up from beneath. Wings ample, *the stigma large, lanceolate*, at least half the length of the marginal cell; *the latter lanceolate, firmly united to the costal margin its entire length*. Three distinct submarginals and an indication of a fourth, *the second shorter than either the first or third*. Recurrent nervures received by the second and third submarginals. *Basal vein confluent with the transverso-medial nervure in both sexes*. Cubital vein of hind wings originating a little *before* the apex of the submedian cell *in both sexes*, rarely confluent with the transverso-medial nervure.

Type, *E. rufiventris*. This genus is allied to *Myzinè*, but is very distinct, as will be seen by the characters given above. It is erected for *Myzine rufiventris* Cress., and it is surprising that observers like Cresson and Cameron (Biol. Centr. Amer. Hym., ii, p. 258) should have overlooked such prominent generic characters as this species possesses. Moreover, the coloration—head, thorax and first abdominal segment black, with the remainder of abdomen bright red, is strikingly different from any of the species of *Myzine* that I am aware of.

The ♀ which has not before been noticed, is very similar to the ♂; the head is much more sparsely punctured, and the thorax in general more coarsely sculptured, except the mesopleuræ, which are very densely punctured, while in the ♂ they have the punctures large and well separated; abdomen above almost impunctate, else the strong scattered punctures evident in the ♂ are very feeble; wings in the middle and at base hyaline, otherwise fuscous, so that they appear bifasciate, hind pair except apex hyaline; first and second joints of flagellum

about equal in length; in the ♂ the first is shorter than the second; colored alike in both sexes.

Two ♀ specimens. San José del Cabo. I am indebted to Mr. Samuel Henshaw for the loan of Cresson's type, which is a ♂.

In my opinion this genus differs sufficiently from the rest of the Scoliidæ, particularly *Tiphia* and *Myzine*, to be constituted a tribe of that family.

SCOLIA BADIA Sauss. San José del Cabo. One ♀.

SCOLIA GUTTATA Burm. Two specimens, ♀ ♂. Tepic. Thoracic markings in these specimens are entirely absent. The only pale color to be found on them exists on the second and third dorsal abdominal segments in the shape of a large spot on each side.

ELIS DORSATA Fabr. San José del Cabo and Tepic.

ELIS TRICINCTA Fabr. Two specimens. Tepic.

ELIS TRIFASCIATA Fabr. One ♀. Tepic.

ELIS PLUMIPES Dr. San José del Cabo. Numerous ♂ specimens. These differ from the more northern specimens by the clypeus being spotted on either side, as in specimens from the United States the clypeus is entirely black. The maculated clypeus is a characteristic of *E. limosa*, but *plumipes* differs in having the fore and medial tibiæ more or less yellowish, whereas in the first mentioned the medial tibiæ are entirely black.

ELIS XANTIANA Sauss. San José del Cabo.

POMPILIDÆ.

POMPILUS PHILADELPHICUS St. Farg. San José del Cabo and Tepic. Five females. These are much bluer than the form common in the United States.

POMPILUS ÆTHIOPS Cress. San José del Cabo. One ♂.

POMPILUS TENEBROSUS Cress. One ♀. San José del Cabo.

POMPILUS FULGIDUS Cress. One ♀. San José del Cabo. This specimen is smaller and less blue than the typical form, but otherwise agrees with it.

POMPILUS CORRUSCUS var. JUXTA Cress. San José del Cabo.

POMPILUS INTERRUPTUS Say. A variety of this species from San José del Cabo.

PRIOCNEMIS FLAMMIPENNIS Sm. Tepic. One female.

AGENIA MEXICANA Cress. Tepic. One female.

PEPSIS RUBRA Dr. Two females, one male. San José del Cabo.

PEPSIS TERMINATA Dhlb. One ♂ from San José del Cabo.

SPHEGIDÆ.

SCELIPHRON LUCÆ Sauss. Three specimens of this handsome species. San José del Cabo.

SCELIPHRON HISTRIO St. Farg. Tepic. One specimen.

SCELIPHRON (*Chalybion*) CÆRULEUM Linné. Twelve males. San José del Cabo.

SCELIPHRON (*Chalybion*) ZIMMERMANNII Dhlb. Five females. San José del Cabo. *Sc. aztecum* Sauss is probably the ♂ of this species.

SPHEX HABENA Say. One specimen. San José del Cabo.

SPHEX FLAVIPES Sm. Tepic. Two females. This is the form described by Saussure as *hirsutus*.

SPHEX ABDOMINALIS Cress. San José del Cabo. One ♀.

SPHEX THOMÆ Fabr. Tepic and San José del Cabo. Two females.

AMMOPHILA MICANS Cam. One ♀. Tepic.

AMMOPHILA ZANTHOPTERA Cam. Tepic. One female. Seems to be close to *mediata* Cress.

AMMOPHILA FEMUR-RUBRA Fox. San José del Cabo. One specimen.

AMMOPHILA PICTIPENNIS Walsh. Three females. San José del Cabo. These differ only from more northern specimens in their smaller size.

AMMOPHILA YARROWI Cress. Eight specimens. San José del Cabo.

CERCERIS GRAPHICA Sm.

I am not acquainted with the female of this species, the sex described by Smith. A ♂ specimen from Tepic agrees so well with Smith's description that I refer it to *graphica* without hesitancy. The flagellum is reddish beneath to the apex and above, at base the scape being entirely of that color; clypeus entirely, sides of face broadly, yellow; other markings on head and those on thorax as described in the female; as are also those on the abdomen, except that the sixth segment is banded and the pygidium is more or less yellow; inclosure at base of middle segment coarsely punctured basally, polished at apex.

The reddish legs with yellow tarsi and the peculiar combination of reddish, yellow and black of abdomen are characteristic of this species.

SPHECIUS CONVALLIS Patt. San José del Cabo. Two specimens.

STIZUS GODMANI Cam. Two specimens, ♀ ♂. San José del Cabo.

BEMBEX MONODONTA Say. Four males. San José del Cabo.

TRYPOXYLON ALBITARSE Fabr. Tepic. One female.

TRYPOXYLON AZTECUM Sauss. San José del Cabo. Five ♀ and thirteen ♂ specimens. In the ♂ the color of the first tarsal joint varies from white to black. The reddish color existing on the basal joints of flagellum beneath in the ♂ does not occur in the female.

TRYPOXYLON SPINOSUM Cam. Two specimens. Tepic and San José del Cabo.

TRYPOXYLON CENTRALE n. sp.

♀.—Head higher than broad, finely and closely punctured; fore ocellus separated from the posteriors by a slightly greater distance than the latter are from each other, a distinct space between the posteriors and each eye; front just above the antennæ with a prominent, longitudinal ridge or carina, which extends less than half way to the fore ocellus; face depressed on each side of this ridge, above it the front convex, parted by a not strong impressed line running from the ridge to fore ocellus; occipital notch indistinct; clypeus flat, not carinated, its anterior margin rounded out, subangular in the middle; space between eyes at the vertex greater than the combined length of antennal joints 2 and 3, at the base of clypeus this space is about one-third less than at the vertex; first joint of flagellum about one-third longer than the second; pronotum strongly and bluntly shouldered at each side; dorsulum finely and very closely punctured, the scutellum less so and not impressed; mesopleuræ less closely punctured than the dorsulum; middle segment above distinctly striated, obliquely and transversely, with a slight, rather indistinct medial impression, posterior face with the sculpture hidden by dense, pale

pubescence, strongly furrowed down the middle, however, sides shining, delicately striato-punctate; abdomen long and slender, first segment subnodose at apex, fully one-third longer than the second, second and third segments united about one-quarter longer than the first. Black; mandibles, darker apically, greater part of fore tibiæ, their tarsi and a ring at base of middle tibiæ, not always present, however, reddish-yellow, sides of the second, third and fourth abdominal segments basally reddish; tegulæ pale testaceous; calcaria whitish; wings hyaline throughout, iridescent, nervures and stigma black, space between the recurrent nervure and the transverso-cubital nervure on the cubital vein distinctly greater than the width of the submarginal cell at apex; clypeus, head in front, including the eye-emarginations, cheeks, and thorax beneath less densely, with silvery pubescence. Length, 9 mm.

San José del Cabo. Two specimens. Distinct by the longitudinal ridge of front, sculpture of middle segment above, clear wings, shape of clypeus, coloration, and position of ocelli, which are not connected by a furrow. Its form and coloration is similar to those species with the middle segment trisulcate above, but in this there is but one sulcus. It is evidently more clearly related to *frigidum* and *bidentatam*.

EUMENIDÆ.

ODYNERUS DORSALIS Fabr. Tepic. One specimen representing the red variety of this species.

ODYNERUS FUSUS Cress. San José del Cabo. One specimen. Differs from Texan examples by having the truncation of the clypeus a little narrowed, and abdomen more suffused with yellow.

ODYNERUS LACUNUS Fox. San José del Cabo. One ♀ specimen.

VESPIDÆ.

POLISTES FUSCATUS Fabr. Ten specimens. Tepic.

POLISTES CARNIFEX Fabr. Ten specimens. Tepic.
All very large.

POLISTES BELLICOSUS Cress. Ten specimens of a form which I consider a variety of this species, differing from Texan individuals by the scutellum and metanotum (postscutellum) being entirely yellow, and the markings in general, particularly those of the abdomen, more extended; the middle segment lacks the parallel yellow lines which occur in the Texan form. The specimens are from San José del Cabo.

POLISTES MINOR Pal. Bve. San José del Cabo. Three specimens.

POLISTES LINEATUS Fabr. Numerous specimens. San José del Cabo.

POLYBIA DECEPTA n. sp.

Entirely of a very dark, almost blackish brown, except the mandibles, which are ferruginous, and the antennæ, which are black, clothed with a sericeous pile; wings: basal two-thirds or more of anteriors black, as are also the nervures, on the remainder whitish, the nervures yellowish, posteriors blackish throughout; middle-segment with a deep, convex, depression, extending from base to apex; hind coxæ very large; medial and hind tarsi with joints 3 and 4 greatly extended at apex within, particularly the fourth joint; petiole of abdomen robust, most convex in middle above, before the apex with a transverse impression. Length, 15 mm.

One specimen, either a ♀ or ♂. Easily distinguished by the color of wings, which is exactly as in *Chartergus apicalis*, as in the rest of the insect. It evidently belongs

to Saussure's Division Iota, and seems to come closest to *P. socialis* Sauss., from Brazil. Its similarity in color to *Chartergus apicalis* is really remarkable.

MISCHOCYTTARUS LABIATUS Sauss. Tepic. One specimen.

APIDÆ.

AGAPOSTEMON MELLIVENTRIS Cress. San José del Cabo. One ♀ specimen. Another unidentified species having the abdomen entirely black, is in the collection, from the same locality.

COLLETES sp. A specimen of a species related to *aethiops* Cress. Tepic.

CALLIOPSIS MEXICANA Cress. Tepic. One specimen.

PERDITA sp. One specimen. Tepic. Related to *δ-maculatus* Say, from the United States.

ANTHIDIUM NOTATUM Latr. Two ♂ specimens from San José del Cabo, which represent a variety of this species, differing in the paler markings, entirely black femora, and by having greater part of tibiæ black; structurally there is apparently no difference from specimens from the eastern United States.

MEGACHILE sp. San José del Cabo. One ♀.

CERATINA MEXICANA Cress. Tepic. One ♀ specimen.

MEGACILISSA THORACICA n. sp.

♀.—Head black, the vertex with black pubescence; front, face, clypeus at the sides and cheeks with pale pubescence, more or less intermingled with black, except on cheeks; clypeus with strong, sparse punctures; labrum reddish, strongly furrowed down the middle; mandibles reddish medially, strongly furrowed, the outer margin

with a fringe of long, golden hairs; antennæ black, the flagellum beneath fuscous, the apical joint beneath reddish testaceous; thorax black, its greater part clothed with dense, black pubescence, which gradually shades from hind part of dorsulum into the fulvous pubescence with which the middle segment is clothed; pubescence of mesopleuræ posteriorly colored as on the front; legs blackish brown, fore femora with black pubescence, that of medial femora a mixture of pale and black, while on the hind pair it is longest and fulvous, tibiæ and first joint of tarsi with short, dark hair on outer portion, internally reddish, apical tarsal joints reddish, with pubescence of a darker color; wings pale fulvo-hyaline, nervures and stigma black; abdomen above with the base of segments 2-4 and the fifth entirely bluish, the apical portion of segments 2-4 greenish, first segment and extreme sides with long fulvous pubescence, the fifth and sixth except base, with long black pubescence, the remaining dorsal segments clothed with short, thin, appressed, yellowish pubescence, which is most conspicuous on apical or greenish portion, beneath, the abdomen pale testaceous, the apical margins of the segments with a fringe of long, fulvous hair, which is, however, blackish medially on the fourth and fifth segments, the sixth ventral with black pubescence only. Length 18 mm.

Tepic. One specimen. Distinguished by the color of the thoracic pubescence and of antennæ. Related to *mexicana* Cress. by color of abdomen.

MEGACILISSA MEXICANA Cress. Tepic. One specimen.

XYLOCOPA FIMBRIATA Fabr. Tepic. Two specimens.

XYLOCOPA VARIPUNCTATA Patt. Ten ♀, one ♂, specimens. San José del Cabo.

CENTRIS FLAVIFRONS Fabr. Tepic. One specimen.

EULEMA FASCIATA St. Farg. One specimen. Tepic. Smith (Ann. Mag. N. H., (4) xiii, p. 442) unites *fasciata* and *cajennensis* under the latter name, notwithstanding that *fasciata* is the first described.

BOMBUS DILIGENS Sm. Tepic. One ♂.

BOMBUS sp. From Tepic are two ♂'s and one ♀ not structurally distinct from *B. medius* Cress., although the thorax lacks the broad black band so prominent in *medius*, and is entirely yellow above. It is probably but a variety of *medius*.

TRIGONA BIPARTITA St. Farg. One specimen. Tepic.

APIS MELLIFICA Linné. Numerous specimens, ♂ and ♀ from both localities.